Basic Tissue -
Nerve Centre of Information

Matrix - Genome - Epigenome

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“If the unexpected is not expected, it will not be discovered, since in that case it cannot be tracked down and remains inaccessible”
Clement of Alexandria (according to Heraclitus)

Introduction

In his book “Der sechste Kondratieff” [The Sixth Kondratieff] the author, Leo A. Nefiodow, continues the research and expositions of Nicolai Kondratieff. Kondratieff, a Russian, analysed the economic growth of the capitalist countries of the western world, identifying a systematic fluctuation between prosperity and recession, each lasting for a period of approximately 50 years. These cyclical changes were named and numbered after him. A Kondratieff cycle may be characterised as a “process of re-organisation of the whole of society which takes place with the aim of opening up large areas of demand in society with the help of basic innovations”.

Thus the individual cycles are characterised by a particular invention or discovery suddenly resulting in the initiation of a revolutionary economic movement, whilst the previous cycles do not lose their importance and their achievements continue to be utilised. Because capitalism places a one-sided value on these economic peaks, an imbalance or deficiency arises, which can and must be corrected in the subsequent cycle.

According to this estimation, the first Kondratieff began in 1780 with the invention of the steam engine and the bloom of the textile industry, lasting until ca. 1830; there followed a great economic upswing with the iron and steel industry. This lasted until ca. 1880, and was then overtaken by the heyday of electro-technology and chemistry, until around 1930. This led into the fourth Kondratieff, characterised by the economic upswing that resulted from automotive technology and petrochemistry. This was succeeded by the fifth cycle, which witnessed the peak of information technology, lasting until ca. 2005. Therefore we have passed the peak of the information technology cycle, and so we now stand on the threshold of a new cycle, the sixth, and the question now is: what can help economics to reach a new peak? Surprisingly enough, Kondratieff and Nefiodow predicted that the new economic driver should be sought in the areas of energy provision and the health system; in the latter, particularly in the areas of nursing, patient care and “matters of the heart”.

This premise throws down a challenge to medicine to strike out on new paths and focus more clearly on the various dimensions of human existence. So far it is primarily the physical, material structure that is being judged and treated in the event of illness. However, we know about the unity of body, mind and spirit and the way in which they influence each other. In order to better understand the reciprocal actions, we want to pay particular attention to the function of the basic tissue and the significance of information in this article.

A. Definitions

a. Basic Tissue

Basic or connective tissue consists of cells (fibrocytes, macrophages, mast cells), the structured intercellular or basic substance, the terminal capillaries of the vascular system, the nerve endings and the open lymph vessels. Phylogenetically speaking, the cells of the basic tissue - fibrocytes and macrophages - are the oldest cells. Whilst the fibrocytes make up the structured basic tissue, the macrophages are able to dismantle it again. This enables a rapid, effective reaction to changes. At certain locations connective tissue consists solely of basic substance, forming the basal membrane of capillaries or even the glycocalyx of the cell membrane. All over the body this basic substance insinuates itself between the bloodstream and the predominating structural components. It adapts in the best possible way to whatever demands are made by the organs that are to be supplied and constitutes the mediating agent between the parenchyma and the vascular and nervous systems.

The basic substance, made up of fibrocytes, is a mesh of highly polymeric sugar protein complexes. These complexes consist predominantly of proteoglycans (PG) or glycosaminoglycans (GAG) and structural glycopro-
teins, which include inter alia collagen, elastin, laminine and fibronectin. Every substance and piece of information necessary for the cell’s supply and waste disposal has to pass through this mesh. It depends on the concentration and molecular size of the proteoglycans as to which substances can pass through this filter system. The electrolytes contained in the basic substance, and the consequent pH level, also determine the state of the basic substance, in other words whether it is a sol or a gel. Negatively charged, high molecular polyelectrolytes in the matrix bind water and ions and this determines the fundamental tone of the matrix, which in turn influences the permeability of the “transit route” between cell and capillary. The protein structure and its charge in the proteoglycans determine the negative charge of the protein-sugar compounds, which is of great importance for the water-absorbency and the exchange of ions (monovalent in exchange for bivalent cations) in the basic substance. Thus we can say that the proteoglycans are responsible for the dynamic balance in the tissue. They create a basic state which is electrostatic and which affects above all the tone, the concentration of ions, and osmosis. External influences on the basic substance are countered by fluctuations in its potential. These fluctuations are then passed on to the interior of the cell, e.g. via the cell membrane (glycocalyx), where they can finally access the genetic code. A certain selection of information takes place via the strength of the stimulus, in other words, the stimulus must show a certain strength if it is to result in any depolarisation of the cell membrane at all.

The fine webbed structure of the individual components of the basic substance consists of polygons, similar to each other, which Prof. Heine has named matrisomes. These polygons are composed of PGs/GAGs, structural glycoproteins, networking glycoproteins, and such proteins (cytokines, hormones, neurotransmitters, metabolites, etc.) as are variably and temporarily attached to the basic substance and the cells and have an influence on their functions. These matrisomes are constructed as spiral, hyperbolic shapes in the form of tunnels. In the interior of these tunnel-like structures lipophilic substances can be transported, as can hydrophilic substances on the exterior. Thus the possibility exists of conveying two very different groups of substances to their destinations simultaneously. This network of polymers between the cells is able to store information, to process it and to disseminate it. With the water that it contains, the basic substance is probably the oldest information and defence system known to nature. Via this route energy can spread through the organism at lightning speed, influencing control circuits in a directive way. This means that, by means of matrisomes, because of their tiny energetic surfaces, minimal impulses in one place can result in major changes in another place. According to Prof. Heine, in nature, there are no geometrical, Euclidian structures, but only these tiny energetic surfaces. These can be recognised on the contours of our bodies right down to the finest building blocks of our tissues. Because of their curved structure, non-connective interactions take place, with corresponding energy shifts.

According to Szent-Györgyi proteins act as semi-conductors in our body, which means that their conductivity is precisely controllable. He postulated that the basic substance, together with water, is an electromagnetic field, in which energy can flow without molecules having to be in contact with one another. In his view water alone can already form structures which enable the flow of energy.

For a multi-cellular organism the basic substance is the equivalent of sea-water for the mono-cellular one. This is why it is known as the extracellular matrix, as opposed to the intracellular matrix, in which the individual cell organelles are embedded, and which is surrounded by the cell membrane.

The intracellular matrix likewise includes tunnel-like structures, the microtubules. The construction of these structures is initiated by corresponding tubuligens. Asymmetrical tubes are formed by polymerisation, and these are composed of two different sub-units. At the so-called “plus end” growth takes place by apposition, and at the
so-called “minus end” breaking down occurs, with shortening. They are contractile, work together with certain proteins and have a shared responsibility for the movement of the cell organelles. The micro-tubules can be isolated and the transport of substances within and outside of the tubules can be observed. Among other things, the tubules are responsible for the gel and sol states of the cytoplasm, by means of the exchange of Calcium ions. They make up the cytoskeleton, and water is found in their interior, which in turn may be classified as crystal water. By means of this system pieces of information may be processed, co-ordinated and passed on. As coherent quantum energy this information then controls all the events within the cell. Our consciousness probably functions in the same way. The centrosome appears to be the controlling unit of the micro-tubules. It comes to the fore particularly during cell division.

b. Information

The concept of “information” has its roots in Latin, and essentially means “bring into a structure”. It is synonymous with “moulding”. Information is something immaterial which frequently requires a material carrier in order to become visible to us. There are several possible definitions of “information”.

1. It can be represented as a relationship, e.g. between transmitter and receiver; in the interpersonal sphere that has to do with our contact with one another by means of words, gestures, and so on. In this way we can exchange emotions, creative ideas, opinions and moral concepts. At the same time this area of definition is characterised by differences as well as relationships. Only in this way is it possible for us to perceive anything at all of the diversity of how things are made, of individual characteristics, of sensation. If everything were pink, then for instance we would be unable to recognise any variations of colour in this world.

2. Another definition of information characterises it as vibration. According to the so-called M Theory (Membrane Theory), all particles such as quarks, light quanta, electrons, protons, atoms and molecules may be traced back to a primal form of energy with an eleven-dimensional spatial time, in other words a membrane, which, from a distance, represents itself as a string (which is why this is also referred to as the String Theory). These strings, which at an even greater distance can only be defined as points, cannot be observed; however, they can be perceived via their vibrations and oscillations, and this can then be portrayed in the form of particles such as electrons. Erwin Schrödinger has already revealed to us the wave character of all matter. It is only oscillations which give matter any expression at all. According to this, the frequencies emitted by the body do not simply have an outward action, but also an inward one, naturally with overlap occurring, which can result in the resonance becoming stronger or weaker, or dying away altogether.

3. The third definition of information concerns the linguistic root: the giving of shape or form. With a piece of information, and with the assistance of mass and energy, something can be brought from the idea stage to a particular form. An ex-
ample which is frequently used here is the building of a house: from the client’s concept via the architect’s plans and the bricklayer’s work, a structure can take shape with the aid of mass (bricks) and become an impressive edifice.

According to the String theory there is an implicit assumption that, in every string, a large amount of data can be stored, and that this can be reproduced. This means that information is storable. This can happen, for instance, by means of characters on the pages of a book, or in the form of bits on the hard disk of a computer. From there the pieces of information can be retrieved at any time, but material - paper, hardware - must be there, plus the energy needed to make them retrievable. Information regarding the structure of human life is stored within the genetic code. This contains the entire building plan of our development and allows the actualisation of the divine idea of incarnation in matter, vitality, mind and spirit. Thus information is the underlying principle of all being.

If we regard matter as the result of predetermined patterns of oscillation, out of the infinite multiplicity of oscillatory possibilities for the primal membranes, strings and particles, then an immeasurable number of harmonic sequences may be formed from the prototypes, with each particle being unique and possessing the ability to store information. Every living being resonates with its environment. Since life may be understood as a dissipative structure, it is dependent on a constant supply of exogenous energy, e.g. via environmental signals. Only in this way can its labile ordered state be maintained.

Alongside this we have the concept of energy. This is a material quantity, occurring as matter, heat, electricity, as the radiation of elementary particles (electrons, protons, neutrons), as formative energy of nucleons in the nucleus of the atom, or as field energy in gravitational, electrical, magnetic and electromagnetic fields. Scientifically, energy may be registered with precision. The primal form of energy (membrane, string or point, depending on the distance) unites an infinite number of varying vibrational frequencies, with each frequency corresponding to a particular quantity of energy, which can make a virtual impression as a quantum or, if it is fixed, may become an actual power. Since all these vibrations are simultaneously possible and may occur in various oscillations, vibrating in both space and time, they may also occur as charges. These charges, in turn, are important for many functions within the organism, because they make movement possible.

**B. Metabolic Functions in the Healthy Body**

In the healthy basic substance - the extra-cellular matrix - substances and items of information are transported, so as to meet the needs of the parenchymal cells. This process is known as natural basic regulation. In order to control these processes, certain vesicles from the cells of the connective tissue and immune system are terminated in the basic substance. When these then decay, a large number of biologically active substances are released; these were either contained within the vesicles or originate from the decaying vesicular membranes. These serve as information transmitters. They may be hormones, enzymes, cytokines, electrolytes or neurotransmitters which, for instance, are capable of triggering a powerful change in the pH level. The action is similar to that of mono-cellular glands: the excreting cells themselves are influenced (autocrine), as is their immediate environment (paracrine).

As well as this, there is also the possibility of leucocytes physiologically dissolving. In this way the basic substance can be regulated in its steady state. It can be demonstrated in cell cultures that leucocytes continue to disintegrate until the cellular substances thus released enable the milieu to support life once more. The particular abilities of a fibrocyte, for example, to synthesize proteoglycans and structural glycoproteins have already been mentioned. The especially fine network that they form is maintained by the electrical charge of the amino-acids that are linked to it. In these networks we find liquid crystal water and ions. In most of the reactions that take place in
the basic substance sugars have an important part to play, since they are a constituent part of coenzymes. The latter in turn are significant for the functioning of the actual enzymes, apart from which they can also facilitate communication between the individual enzymes. The simplest building block of such coenzymes or other messenger substances, such as cAMP, cGMP or Inositol phosphate is called nucleotide. It consists of a monosaccharide (in most cases ribose), an alkali (amino-acid) and a phosphate, and was initially discovered as a constituent of nucleic acids (DNA, RNA). In this context, Hyaluronic acid plays a special part, because it forms the “backbone”, to which the proteoglycan molecules attach themselves. In tumour tissues proteolytic and hydrolytic enzymes from the cancer cells are secreted away in vesicles; when the vesicles later disintegrate, these enzymes then destroy the basic substance. In particular the proteoglycans are broken down, and the polysaccharide components of the basic substance are reduced. If the development of tumours continues there is then a predominance in the basic tissue of extended, negatively charged Hyaluronic acid strings, which no longer bond with proteins.

In addition to its supply and structuring tasks, the basic tissue also fulfils the function of a large storage organ, in which both fats and sugar, plus proteins can be stored. Here too the fibrocyte has a critical role to play, since it creates the networking and structural proteins, with which the storage is achieved. The regulation of the basic tissue can be seriously disturbed if there is too much storage, particularly of proteins because these are available in excessive quantity. In the previous century Prof. Wendt urgently drew attention to this fact, recommending abstinence from or restricted intake of proteins as a way of avoiding the problem.

Again and again other researchers have referred to the buffering of the acid-alkaline balance, aided by the basic substance. It is only by means of the basic substance that the danger of systemic hyperacidity is brought under control. The basic tissue is repeatedly cleansed by a gradual process of de-acidification via the kidneys, liver and lungs. The basic substance is also described as a “pre-kidney”; just like the kidney it determines the pace at which the balancing out of acidity occurs, via a drop in potential. In this context the most important component of the basic substance is the colloidal part. The cells would never be in a position to retain the acidic peaks and store the metabolic waste without themselves suffering damage. Therefore, according to Schade, the only possible site for storage of waste is the noncellular, easily regenerated, colloidal connective tissue, which protects the cells.

C. The Interaction of Genetic Code, Cells, Cell Membrane and Basic Substance

a. Genome and Epigenome

If the genetic code is, by definition, a storehouse of information containing the plan of the entire development of a living being, then the question arises as to how this storehouse came into being, and as to the ways in which this information can be retrieved and translated into action. The items of information are stored in the DNA, the genes, the genotype. Just as important a role is played by the various sub-species of RNA in the storage, but also in the implementation of the information according to the building plans of the DNA.

The tiniest components of RNA and DNA consist of a sugar molecule (ribose or deoxyribose) and four additional aminoacids: adenine, cytosine, guanine and uracil (RNA) or thymine (DNA). Contrary to what is generally supposed, the actual control of the cell lies with the RNA and the proteins which it forms, whereas the DNA contains all the available programmes as a back-up copy. After the decoding of the human genome scientists had quite a surprise, inasmuch as they discovered that only 1.2% of the genes are active; the remaining genes were at rest and muted. Initially therefore it was referred to as “junk genes”. In the meantime it has turned out that these genes certainly had been used in the course of evolution and are needed during a human being’s embryonic development. One particular part of these genes, the “gypsies”, originate from mycobacteria,
bacteria, viruses and borreliae, which have immigrated into the human genome via horizontal gene exchange. At any rate, the human genome owes 220 genes to this fact.

Current scientific opinion considers the genetic code as established. However, research in the field of epigenetics shows that each cell has an identity, which consists in the fact that genes are equipped with a “switch”, with which they can be switched on and off, according to their purpose. This can occur via various pathways, with - in most cases - methyl groups being taken up or removed again. These groups then act as linking-up sites for other protein groups. All these changes influence the activity of genes. The totality of these pre-set methyl and protein groups is referred to as the epigenome. It defines the purpose of the cell. The research carried out over the last 10 years has revealed something amazing. Namely that the epigenome is shaped by many influences from the environment, e.g. diet, poisonings, hormones, hunger, stress, climate, unusual burdens, upbringing, love, experiences in utero, traumas, and a great deal more. These epigenetic alterations to the genome determine the individuality, e.g. of the human being, whilst being passed on to the daughter cells when the cell divides. The genome itself is not touched, which has been particularly well researched in uniovular twins. With exactly the same original genetic material, external influences can alter the epigenetic code to such an extent that the two individuals exhibit a completely different phenotype, and may differ from a good state of health in one case so far as severe metabolic disorders in the other. This can even go so far that epigenetic divergences, even those dating from the maturation point of ovum and sperm, can exert an influence on the new life that is coming into being.

Epigenetic changes can be inherited for up to six generations (red-eyed fruit flies), although the germ cells of more highly-developed beings are largely protected from these epigenetic modifications by the so-called Weismann barrier. (Weismann hypothesised that genetic information is absolutely protected from the takeover of information from acquired properties. According to the current state of research this is only correct up to a point). Besides, at the moment of maturation of the individual germ cells, the germline undergoes another “cleansing” of epigenetic material. The process of this epigenetic transmission is explained by the varied changes which the genome can experience, assisted by RNA. Simply by methylations, RNA resonances and histone changes, the genome can be activated or deactivated to the point where very varied reactions take place in the cells. Furthermore, many influences in the womb are immediately converted into epigenetic changes in embryos. Every beekeeper is aware of such changes and knows that with special feeding (queen feed) ordinary embryonic bees will become queen bees. By means of changes to the epigenome in their ova or sperm cells, parents characterise the individual starting situations of their children and grandchildren, so that the parental generation bears a heavy responsibility.

According to these explanations we may realise, on the one hand, what comes from the cell nuclei is not items of information for life processes, but rather that they serve as a huge library of building plans. The signals that retrieve the stored knowledge have an environmental origin. They may come directly from the cytoplasm, from the environmental milieu (sea water) or, in the case of higher, multi-cellular living beings, from the common basic substance, the external environment (beyond body or plant), and from the cosmos. On the other hand, environmental influences which may also have to do with our own state of consciousness, attain a whole new status if we recognise that it is through these that we shape our life situation, our health, our well-being and, in the final analysis, make sense of our lives. Admittedly it is the genes that dictate the building plans, but the epigenome is changeable and we can influence it. We can visualise something, create something with the power of imagination, which can change our matter and bodily functions. According to these lines of scientific reasoning the following words take on a whole new meaning:
Pay attention to your thoughts,
For they become your words.
Pay attention to your words,
For they become your deeds.
Pay attention to your deeds,
For they become habits.
Pay attention to your habits,
For they become your character.
Pay attention to your character,
For it becomes your fate.
(Inscription in an English monastery)
(from Ulrich Warnke)

Put simply, one might express it as: “Life is what you make it.”

b. The Cell Membrane

In this context the cell membrane has an important part to play, as shown, for instance, in the work of Bruce Lipton and others. So-called integral membrane proteins (IMPs) have particular significance in the transmission of signals into the interior of the cell, and these are stored in the membrane. Here we must distinguish between the receptor IMPs and the effector IMPs. The receptor proteins are the cell’s sensory organs, picking up signals both from the cell’s environment and from its interior, and thus keeping watch over every function. There are special receptors for every signal and these, by means of their connection to an environmental signal, change to an active form and thus change their electric charge for a short time. These receptors can “detect” not only material substances, but also fields of oscillating energy, such as light, sound, radio waves, for instance. These energies set off vibrations in the receptor proteins on the basis of a resonance, which in turn results in changes of charge and structure in the receptor protein. Such living behaviour can also be controlled by invisible energies, such as thoughts and feelings, and also provides a scientific explanation for the action of energy medicine. In any case there is a resonance behaviour between the transmitted information and the special receptor proteins.

For the messages that are picked up by the receptor proteins to be implemented within the cell, there are so-called effector proteins which trigger “cell action”. Thus there is quite an important and ingenious receptor-effector system which converts signals from the environment into cell behaviour. In this connection, certain channel proteins in the cell membrane should be mentioned; depending on their charge these can take on a tunnel-like structure, thus forming openings, through which ions may be transported. When the channel proteins are active they assume the tunnel structure; when they are inactive the protein structure becomes knotted in a certain way which makes it impermeable.

Of particular importance is the channel protein Sodium-potassium ATPase, which Bruce Lipton compares to the revolving door of a department store at peak shopping times. At such times the door is moving continuously, and this is what also happens in the cell membrane. At each „revolution“ this channel protein transports three positively charged Sodium ions out of the cell interior, and in return two positively charged Potassium ions into the cytoplasm. This Sodium-potassium adenosine triphosphatase consumes roughly a half of the body’s total energy requirement, but in doing so it creates a drop in potential between the cell interior and the area outside it. In this way the cell interior is negatively charged in comparison with the external cell membrane. Thus a voltage of as much as 80 mV can be attained for important energetic processes. A second variety of the effector proteins regulates the shape and mobility of the cells and is referred to as cytoskeletal proteins. The third occurs as enzymes which in many ways enable important cell functions to take place. In their active form all these effector proteins can act on the genes as signals and, in turn, can “switch them on”.

To sum up then, it may be said that environmental stimuli may be conducted as signals into the cell interior via the integral membrane proteins (receptor and effector proteins), and there, they can be controlled by regulating proteins which surround and influence the genome, resulting in certain genes being “read”. By means of further mediation on the part of the RNA sub-groups, certain proteins - for instance - are then produced.

D. Significance of this for Natural Medicine.
Pieces of information are picked up in many different forms via our sensory organs, and with our food, water and air. They are passed on by the nervous system and, in the basic tissue, they are converted into signals for the cells. Recently investigations have been carried out at the Ludwig Maximilians University in Munich, in connection with discoveries in the field of neuro-immunology, according to which the gut has olfactory receptors enabling it to “smell” essential oil of thyme, for example. There is no doubt regarding the discovery that each of the body’s functions is initiated according to the laws of quantum physics. At the same time, within the living being, a course is set, according to the direction in which the reactions are to be steered. This is dependent on an innate predetermined pattern and psychological factors both conscious and unconscious. Those vital reactions which correspond to the present moment are matched to the necessity of that given moment. Since our consciousness feeds on experience, the contents of our consciousness may have been incorrectly programmed, thus resulting in false interpretations and achievements. Since in Nature every process operates by means of feedback, these can be understood by application of the Wheeler-Feynmann Absorber theory. Briefly this means: a transmitter dispatches an energy which is picked up by the receiver, slightly altered and then reflected back to the sender as a reply. Every process in a living being is controlled by obligato-

ry cycles such as these. The part played by our consciousness consists in determining the feedback on the basis of its own imaginations.

Within the body matter, the most important link-ups between quanta and molecules are created via neurotransmitters, nerve cords, pheromones and scents extending right into the cell interior. In the basic tissue, with its cells, its basic substance, the terminal capillaries of the vascular system, the nerve endings and open lymph vessels, items of information from the body itself and from the environment meet, to be routed onwards to organs and single cells. Prof. H. Heine tirelessly draws our attention to the fact that exchange and transport of substances and energies within the basic substance can only run smoothly if the latter is not “clogged with waste products”. Another important condition is an adequate water supply, which can only be stored in a clean basic substance. Uptake of essential nutrients, minerals and vital energy, plus trace elements, is the material basis for the presence of necessary building blocks for synthesis in the cells and construction and maintenance of electric potentials. Oscillatory impulses which the body encounters, or which are created by it, can only be passed on as information and processed if they encounter resonance, otherwise they will be weakened or extinguished.

For treatment with Natural Medicine this means that the human or animal body is to be supplied with a healthy, frugal diet, suited to the species concerned. In any case, especially for humans, attention must be paid to ensuring that the portions of animal fats and proteins are commensurate with their actual requirements, with pork, cow’s milk and hen’s egg products being consumed in extremely small quantities or else avoided altogether. Animals and foods produced from them contain much information, which may be of a subtle nature (fear before and during slaughter) or a material nature (natural hormones in the milk of the lactating cow, impurities and toxins from additives in fodder), and this is consumed along with the animal produce. In consideration of the horizontal gene exchange, foodstuffs of vegetable origin are also becoming increasingly problematic because, on the one hand, genetically modified foodstuffs are being cultivated outdoors and, on the other hand, so-called plant protecting agents represent a considerable toxic load in fruit and vegetables, and these are incorporated (taken up) either via food of animal origin or directly by human beings. In this connection it may be of interest to know that there is already a study carried out on humans, according to which genes from genetically modified foodstuffs come into contact with the natural intestinal flora via the digestive process, and cause it to change. Horizontal gene transfer (HGT) may likewise occur between genetically modified agri-

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cultures and natural plants, which can result in highly resistant weeds developing.

Chemicals, which are used to combat disease in humans and animals, are also capable of inflicting considerable damage on the subtle level because, in some cases, their vibrancy is a thousand times higher than that of healthy cells in the body, which can be seriously affected by them.

It is all the more significant for us to eat a healthy diet containing plenty of nutrients which will intercept dissonances. Foodstuffs which are fresh and natural fulfill this requirement. Nutrients which have a particular effect on the epigenome are choline, methionine (as a methyl group donor), folic acid, betaine, vitamin B12 and others. Choline is abundantly present in eggs, soya beans, peanuts and green salad, for instance, and can be taken as a supplement in the form of EPALIPID (BIOFRID), soya lecithin. Methionine is found in broccoli, tofu, garlic, spinach, eggs, coarse wholemeal bread, Brazil nuts, rice, green peas, fish, beef or chicken. Folic acid can be taken by eating wheat germ, beetroot, green leafy vegetables, broccoli, coarse wholemeal bread, tomatoes, carrots, asparagus, peas, beans, egg-yolk and fruit. Only very small quantities of Vitamin B12 are found in fruit and vegetables, so the best sources are fish, meat and dairy products.

b. Particular Constituents of Plants

Green tea, curcumin and soya bean products have been shown to influence the enzymatic system of epigenomes, thus possessing the ability to alter our “second genetic code”. According to scientific investigations the constituent of green tea, Epigallocatechin-3-gallate (EGCG), is capable of inhibiting the DNA-methyltransferase (DNMT) in cancer cells. This might be the reason for the fact that, in the animal model, this tea reduces the growth of some types of cancer. It is possible that its constituents serve to activate certain genes which suppress tumour growth! (However, this action can be suspended if certain chemical drugs are administered at the same time for the treatment of cancer.) Curcumin is said to influence histones. In Asia its anti-inflammatory and energising action has been known for thousands of years. It has been shown in in-vitro studies that this substance releases genes at certain points in the genetic makeup; these genes can be read by the body, and their activity protects against cancer. In the soya bean we find, inter alia, a phyto-œstrogen, i.e. genistein. This substance can protect against cancer and obesity. However, in higher doses genistein acts as a poison, which can reduce fertility in both sexes. Certainly it is particularly effective during the period when the embryo is developing and, even at that stage, it can exert a strong influence on the epigenome of a growing fetus. It alters certain histone proteins after they have linked up with œstrogen receptors, and this in turn results in displacement of methyl groups. In this way genes can be silenced for a lifetime.

c. Isopathic Remedies and SA-NUM Therapy

From the scientific point of view, the unlocking of the genetic code has proved that our genetic make-up is composed of many contributory parts, each consisting of a wide variety of microbes. In the course of evolution the underlying HGT has made enormous strides, and this can help us to comprehend the action of Isopathic medicines. These potentised preparations from fungi resonate with the genetic material of our bodies and thus they can activate the stored pieces of information, and this results in physiological regulation and recovery from illness. However, the material, physical milieu must likewise be favourable if the information that enters the body via the medicines is to unfold its action. The basic tissue, with all its constituent parts, plays a substantial role in enabling the signals to find their way and ensuring that the healing processes can get underway. A precondition for this is a supply of materials which, inter alia, can enable a methylisation or “activation” of genes. Besides this, it is not difficult to recognize how important the patient’s attitude to his/her own healing process is, not to mention the accompanying stance of the therapist. All the methods that are available to
the Natural Therapist to improve the function of the basic tissue, constitute signals to the individual components of this tissue, which are apparently converted into vibrations and have an influence on the regulatory cycles. These methods include tender loving care (TLC), acupuncture, massage, energy treatments with machines or remedies, cupping, blood-letting, stimulation methods, Baumscheidt’s cupping method, autoisotherapy (blood or urine), stroking, affirmations.

As a result of these considerations, Prof. Enderlein’s discoveries regarding the action of immunomodulators may be much better understood. In particular the preparations from mycobacteria, such as UTILIN “S” and BOVISAN can be applied with such success in cases of metabolic blockages because they have an “opposite number” in the genetic code, which can resonate with them. This is a proof of Enderlein’s genius: it was precisely these active substances that he used to remove a “mochlosis” - his name for blockages. The fungi and bacteria which were processed in a particular way, thus becoming Isopathic remedies and immunomodulators, are ubiquitous; we can assume that they have an equivalent in the human and animal genetic code. Toxicological investigations of Isopathic remedies confirm the indications that immune cells are also stimulated by this resonance. This active principle becomes all the clearer since David Bohm, a pupil of Einstein’s and a respected physicist, postulated analogously that the universe, and everything that it has produced, can be viewed from three aspects which are developing reciprocally: energy, matter, sense. These three, i.e. energy, matter and sense, result in Being, because they are reciprocally “folded into one another”. For the therapist working with natural therapy methods and remedies, particularly Isopathics, this means that all levels are included, because the medicines are potentised along homœopathic lines from particular fungal preparations which resonate with the genetic code and experience an additional reinforcement of their action through the positive states of consciousness both of the therapist and of the patient.

The importance of consciousness for the patient’s recovery is incontestable, because belief, as a child of the spirit, can overcome mountains, as is well-known. In this context I refer you to an experiment, in the course of which death occurred in an Indian who had been sentenced to death, because he imagined himself bleeding to death.

Dean Ornish draws our attention to the particular positive effect of TLC (tender loving care) on the animal organism. He reports on feeding experiments with rabbits. A group of these failed to develop arteriosclerosis, despite a catastrophic composition of the feed they were given, because, unlike the other rabbits involved in the experiment, they were regularly stroked and fondled.

**E. Summary**

Hormones, nerves, transmitters and receptors are all required in order to ensure the connection on the physical level between information items from the environment and those from the cell nucleus. The stimuli that arrive are transformed into vibrations within the basic tissue, and with their assistance chemical/physical reactions are triggered, and these then maintain regulatory cycles by means of feedback. According to Prof. H. Heine the entire basic regulation is synchronised by the Nucleus suprachiasmaticus. This requires non-visual photons, which are received via ganglion cells of the optic nerve which contain melanopsin. The polarisation of the cell membrane plays a critical role in the onward transmission of stimuli. If there is a deficiency of the most important materials, such as Mg, K, Ca, Na, no potential gradient can be built up, and this results in physical weakness and lack of energy. Generally speaking, green fruit and vegetables contain plenty of potassium and magnesium, to build up the potential of the cell membrane. As well as this, potassium for instance can be given in the form of ALKALA N - it is contained there in the form of the hydrogen carbonate - whilst magnesium can be supplemented via MAPURIT L. Thus the material building blocks must be supplied. As well as this, everything must be avoided which puts the patient in a state of chronic stress.
that can lead to a negative experience with fear, restlessness, a lack of energy and no way out. To improve their energy situation, it is necessary for patients to discipline themselves. They should take care to have adequate sleep (before midnight and free of interruptions), a good diet (natural, unrefined with all the elements, trace elements and vital substances), fresh air (free of smoke and exhaust fumes), correct respiration, sufficient movement and rest periods. As far as possible they should also avoid social toxins, large conurbations and crowds, and physical/chemical stress.

Even the “sweet” morning breakfast, with rolls, butter and marmalade can lead the patient into the trap of low energy and over-excitement in the early forenoon. Vitamins C, A, E, and B-complex, plus flavonoids are contained in a natural and predominantly vegetable diet; in the event of extreme stress or disordered assimilation they may need to be supplemented. Our modern diet contains too many saturated fatty acids. They can be avoided by eating as many basic foods of vegetable origin as possible, whilst eating unsaturated fatty acids at the same time. These are found in a diet rich in nuts and seeds. In many people, however, that is often not enough, but supplementation is possible using oils of vegetable and animal origin. LIPISCROR contains vital omega-3-fatty acids and BIOFRID Evening Primrose oil capsules contain plenty of gamma-Linolenic acid. The BIOFRID preparation EPALIPID contains constituents of soya lecithin, which build up membranes and are important for methylisation processes in the epigenome. To forestall a superfluity of free radicals, people/patients should eat plenty of bright-coloured plant constituents and fruit, which may be drunk in the form of vegetable juice. Should these juices contain sulphurous molecular groups, e.g. from the Brassicaceae family (varieties of cabbage, mustard), or Allium plants (onion, garlic), then the body is able to form glutathion, which detoxifies. With a shot of linseed oil added, a vegetable juice drink like this is the equivalent of the “Budwig diet” for people who have a dairy protein intolerance. In the event of Selenium deficiency, the SANUM company recommends using SELENO-KEHL 4X as a homoeopathic remedy, or Selenium (BIOFRID) in the form of Seleniummethionine. Sometimes essential amino-acids must be taken, so as to have methyl group donors available for the epigenome and to form the body’s own supply of glutathion (cysteine, methionine). The special value of B-group vitamins has already been covered when discussing epigenetic changes. In this respect Vitamin B6 is of outstanding importance and, in the event of assimilation problems, Vitamin B12 may need to be given parenterally in the form of VITAMIN B12 SANUM. Ubiquinone and NADH are other important building blocks, which can be taken in a vegetable or an animal diet, or as Q10- and NADH preparations, to improve the work of the mitochondria (energy production) and the detoxification in the body.

The gut is really an especially important fundamental pillar of human health. This is why the SANUM-Kehlbeck company recommends cleansing the gut with Isopathics, hapten and immunobiological remedies according to the plan shown in Figure 1. Microbes that live in a symbiotic relationship with us are an important part of ourselves, not only with regard to their number and weight, but because of their information and their exchange with our cells. In the meantime it has become well-known that the gut and its nervous system largely control our consciousness, our subconscious and our emotional situation. Everyone is aware of the healing action of a cleansing intestinal enema, when toxins are evacuated, blockages freed up, and entire organic systems are “set free”. This physical unburdening is frequently accompanied by a great release of tension and by emotional relief. The pressure on people is really taken away. At the same time, if there is additional natural therapy treatment, there is the possibility of improving the patient’s whole physical-mental-emotional situation. Touch, care and the loving vibrations make it possible, like faith, to move the proverbial mountains, because both are based on resonance. This phenomenon may be observed in all living creatures, and that in turn only works because we are all
Treatment Plan for Cleansing the Gut
If necessary the forms of administration and treatment intervals may be altered.

1. Milieu Regulation for the entire duration of treatment

ALKALA N one measuring spoonful twice a day in hot water,
In the mornings: 60 drops SANUVIS
In the evenings: 5-10 drops CITROKEHL or 5-10 drops FORMASAN

Check for: disturbance fields, heavy metals, stress, etc.
Regulate the mineral balance, Dr. Werthmann’s diet.

2. Specific Regulation starting concurrently with Stage 1, for 10-14 days

In the mornings: FORTAKEHL 5X , 2-8 drops
In the evenings, depending on the symptoms: NOTAKEHL 5X , PEFRAKEHL 5X or ALBICANSAN 5X ; 2-8 drops, starting with the lowest number.
PROBIKEHL, 2 capsules twice a day, with or before a meal (30 days consecutively), then move to Stage 3

3. Basic Regulation over a fairly long period (4-6 weeks)

Monday - Friday: in the mornings MUCOKEHL 5X , in the evenings NIGERSAN 5X , 2-8 drops in both cases, starting with the lowest number.
Saturday - Sunday: Medication as for Stage 2.

4. Immunomodulation starting concurrently with Stage 3 (for several weeks)

alternating weekly, depending on the symptoms: BOVISAN 5X , UTILIN 6X , RECARCIN 6X , and/or LATENSIN 6X , ½ - 1 caps. a week

alternating daily SANUKEHL preparations, depending on the symptoms (e.g. Pseu, Klebs, Coli, Strep), 4 drops to be taken orally and 4 drops to be rubbed in.

a part of one great energy-field, which we are constantly able to alter by the fact of our existence.

F. Conclusion

Nefiodoff shows us the way into the sixth Kondratieff - a way which should be characterised by love, cordiality and care for others. In a world where people’s anxieties are stirred up both intentionally and unintentionally, in which stress drives them on to work faster and faster and to ever higher achievements, to restlessness with a loss of the sense of purpose in life, in such a world the calming, loving vibrations of fellow-beings can lead them to re-think. We human beings need to take care and should re-discover links (religio) with the past - creation and the Earth. We are a part of it and thus also a small component of the great hologram in which the entire information, energy, beauty and immeasurability of creation are contained. In Luke 17, verse 21 we read: “The Kingdom of God is within you”. From which we can deduce that the source of power is situated inside us. Let us make use of it!

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